

REMARKS-General

The newly drafted independent claim 42 incorporates all structural limitations of the original claim 40 and includes further limitations previously brought forth in the disclosure. No new matter has been included. All new claims 42-51 are submitted to be of sufficient clarity and detail to enable a person of average skill in the art to make and use the instant invention, so as to be pursuant to 35 USC 112.

Response to Rejection of Claims 40-41 under 35USC103

The Examiner rejected claims 40-41 over Feng (5,509,425) in view of other cited art. Pursuant to 35 U.S.C. 103:

“(a) A patent may not be obtained though the invention is **not identically** disclosed or described as set forth in **section 102 of this title**, if the **differences** between the subject matter sought to be patented and the prior art are such that the **subject matter as a whole would have been obvious** at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”

In view of 35 U.S.C. 103(a), it is apparent that to be qualified as a prior art under 35USC103(a), the prior art must be cited under 35USC102(a)~(g) but the disclosure of the prior art and the invention are not identical and there are one or more differences between the subject matter sought to be patented and the prior art. In addition, such differences between the subject matter sought to be patented **as a whole** and the prior art are obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

In other words, the differences between the subject matter sought to be patent as a whole of the instant invention and Feng which is qualified as prior art of the instant invention under 35USC102(b) are obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

The applicant respectfully submits that Feng fails neither suggest nor anticipate the following distinctive features as claimed in the newly drafted claims 42-51 as:

(i) The claiming elements of a process claim are the acts in the steps included, Feng fails to anticipate the elements of (a) collecting a plurality of EKG signals (b) converting the EKG signals into ... and (c) analyzing peaks for each of the power spectrum signals ... as claimed in the claim 42 as a whole. Feng merely suggests the method of detecting a heart disease of a patient without teaching any detail technology of how to locate it. However, the instant invention provides a method of **detecting and locating** heart disease of the patient with respect to the locations of the connectors on the patient's body.

(ii) Feng does not disclose where the connectors are located at the patient to obtain the EKG signals. The instant invention provides a plurality of connectors at locations of the patient which includes positions proximate the patient's right arm, left arm, right foot, left foot, and six separate areas on the patient chest (as claimed in newly drafted claim 42).

(iii) Feng does not suggest or teach the EKG signals are converted into power spectrum signals in frequency domain (as claimed in newly drafted claim 42).

(iv) Feng's method is to analyze the peaks in time domain. However, the instant invention analyzes peaks for each of the power spectrum signals with respect to a plurality of evaluative standards for the peaks to detect and locate the heart disease of the patient with respect to the locations (as claimed in newly drafted claim 42).

(v) Feng fails to teach and anticipate how to convert the EKG signals. The instant invention provides the steps of modifying the EKG signals to a plurality of **altered signals** and converting the altered signals into the power spectrum signals in the **frequency domain** (as claimed in newly drafted claim 43).

(vi) A mere recitation of the peaks in Feng does not anticipate or suggest the peak including a first peak, a second peak, a third peak, a fourth peak, and a fifth peak, the first, second, third, fourth and fifth peaks correspond to a first five consecutive peaks for the power spectrum signal as viewed moving up in frequency from zero Hertz in the frequency domain (as claimed in newly drafted claims 44 to 45).

(vii) Feng never mentions any concept of analyzing the first to fifth peak in magnitude as indicative of heart disease to detect and locate heart disease of the patient (as claimed in newly drafted claims 46 to 47).

(viii) Feng discloses a method to analyze the peak at 40Hz. However, the instant invention analyze peaks for each of the power spectrum signals in the frequency domain having **a range from 0 to 25 Hertz** as shown in Figs. 5A to 5H (as claimed in newly drafted claims 48 to 51).

Therefore, the difference between Feng and the instant invention as claimed in claims 42 to 51 is not limited to the disclosure of "ECG signals", but includes the above distinctive features (i) to (viii).

The Examiner appears to reason that since Feng teaches that a method of diagnosing heart disease by using 5 ECG electrode positions, it would have been obvious to one skilled in the art to use 10 electrodes and place the electrodes in standard 10 electrode ECG locations. But this is clearly **not** a proper basis for combining references in making out an obviousness rejection of the present claims. Rather, the invention must be considered as a whole and there must be something in the reference that suggests the combination or the modification. *See Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984) ("The claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination"), *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984), ("The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.") *In re Laskowski*, 10 U.S.P.Q.2d 1397, 1398 (Fed. Cir. 1989), ("Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, "[t]he mere fact that the prior art could be modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.")

In the present case, there is no such suggestion. Feng fails to suggest the above distinctive features (i) to (viii) as claimed in the instant invention. Even it was known in the art that ECG devices and method use 10 electrodes and place the electrodes in the standard 10 electrode ECG locations to provide a conventional electrode system, the analysis of the peaks of each of the power spectrum signals are based on the evaluative standards in frequency domain which is different from the conventional diagnosing method. That is, modifying Feng with the standard 10 electrode ECG locations, as proposed by the Examiner, would not provide a method of detecting and locating a heart disease by locating the connectors at the patient's right arm, left arm, right foot, left foot, and six separate areas on the patient chest and analyzing peaks for each of the power spectrum signals against a plurality of evaluative standards for the peaks in frequency domain so as to detect and locate the heart disease of the patient with respect to the locations.

Applicant believes that for all of the foregoing reasons, all of the claims are in condition for allowance and such action is respectfully requested.

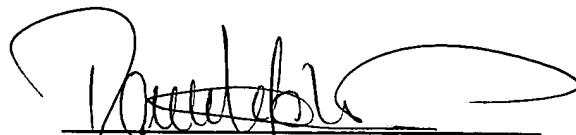
The Cited but Non-Applied References

The cited but not relied upon references have been studied and are greatly appreciated, but are deemed to be less relevant than the relied upon references.

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of the objection are requested. Allowance of claims 42-51 at an early date is solicited.

Should the Examiner believe that anything further is needed in order to place the application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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I hereby certify that this corresponding is being deposited with the United States Postal Service by First Class Mail, with sufficient postage, in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" on the date below.

Date: 11/15/2004

Signature: Steven Cheung
Person Signing: Steven Cheung